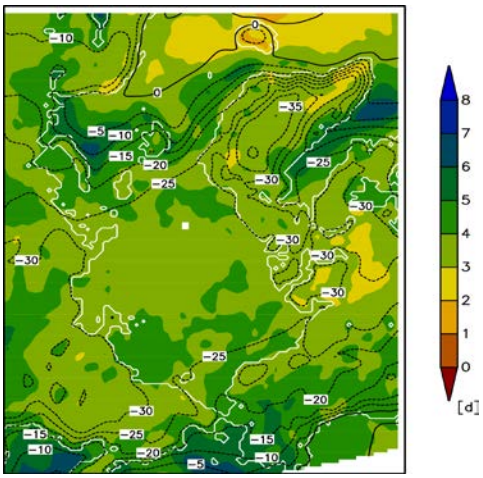
Project Title: Polar CORDEX

Introduction

Polar CORDEX focuses on both Arctic and Antarctic regional climate simulations and is represented by 13 Arctic-focused and ca. 5 Antarctic-focused modeling groups. Details about the participating groups, models, and conducted/planned simulations can be found at www.climate-cryosphere.org/activities/targeted/polar-cordex.

Science Highlight



Ensemble mean from 12 Arctic RCMs of Cold Spell Days (CSDI; shading) and mean 2m air temperature (isolines) for winter (DJF), averaged over 1980-2010. In comparison to ERA-Interim, the ensemble mean captures the mean air temperature very well (pattern correlation coefficient 0.98, mean root mean square error 1.7K). Cold temperature extremes represented here by CSDI are less well reproduced (pattern correlation coefficient 0.64, mean root mean square error 1d), but still, the general pattern and magnitude of the reanalysis data is represented (Matthes et al., in preparation)

2016 Highlights

- Four oral, seven poster presentations, and Polar CORDEX breakout session during the ICRC-CORDEX 2016 conference, Stockholm, May 2016.
- Arctic CORDEX runs from 11 atmosphere and 6 coupled atmosphere-ice-ocean RCMs are available for the Era-Interim period.
- Some high resolution simulations (15 km pan Arctic and 5 km Greenland) are available.
- Multi-model analyses of extreme temperature and cyclones are finished.
- Arctic CORDEX simulations are used to project temperature and precipitation change over Svalbard area.
- The annual Arctic CORDEX meeting was held in Bergen/Norway at UNIS/Bjerkness Centre in Nov. 2016.

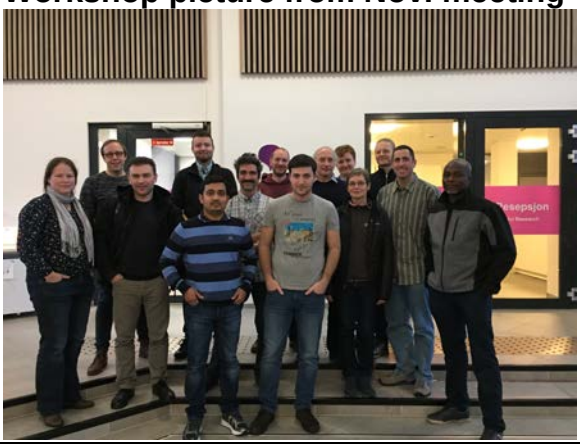
2016 resulting publications

- 11 papers at ICRC-CORDEX conference (abstracts at www.icrc-cordex2016.org)
- see “Publications” under our web site

Future activities and developments

- Continuation of multi-model analyses for Arctic CORDEX.
- At the moment there are few Antarctic simulations, but the plan is to enable multi-model intercomparison studies.

Workshop picture from Nov. meeting



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